

# DU PONT

## MATERIAL SAFETY DATA SHEET *DPM 5466*

### SECTION I

MANUFACTURER'S NAME E. I. du Pont de Nemours & Co. (Inc.)		EMERGENCY TELEPHONE NO. (302) 774-7500
ADDRESS (Number, Street, City, State, and ZIP Code) Wilmington, DE 19898		
CHEMICAL NAME AND SYNONYMS Hydrofluoric Acid, Aqueous		TRADE NAME AND SYNONYMS Hydrofluoric Acid 70% Tech.
CHEMICAL FAMILY Inorganic Acid	FORMULA HF Solution, Aqueous	

### SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

70% HF in water

### SECTION III PHYSICAL DATA

BOILING POINT	66 C	151.9 F	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	1.258
VAPOR PRESSURE (mm Hg) @ 20 C/ 68 F	124		PERCENT VOLATILE BY VOLUME (%)	100
VAPOR DENSITY (AIR=1)	0.7		EVAPORATION RATE (ether = 1)	less than 1
SOLUBILITY IN WATER	complete			
APPEARANCE AND ODOR Clear, colorless to slightly tinted fuming liquid; pungent odor				

### SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method Used) Non-flammable	FLAMMABLE LIMITS	LEL	UEL
EXTINGUISHING MEDIA Water		AUTO IGNIT TEMP.	
SPECIAL FIRE FIGHTING PROCEDURES Cool tank with water if exposed to fire. Wear self-contained breathing apparatus & full protective clothing including boots.			
UNUSUAL FIRE AND EXPLOSION HAZARDS Hydrofluoric Acid corrodes most metals releasing flammable & explosive concentrations of hydrogen (particularly when diluted).			

### SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE (ACGIH) 3 ppm (hydrogen fluoride)	TIME WEIGHTED AVERAGE (OSHA) Not established
EFFECTS OF OVEREXPOSURE Extremely hazardous liquid and vapor. Severe inhalation, skin and eye hazard. Causes severe burns which may not be immediately painful or visible.	
EMERGENCY AND FIRST AID PROCEDURES If contact is even suspected, first aid treatment should be started immediately. Call physician immediately. Immediately flush with large quantities of cool water for at least 15 minutes while removing contaminated clothing & shoes; pay particular attention to skin under nails. Then apply iced alcoholic or aqueous benzalkonium chloride solution, iced 70% ethyl alcohol, or iced saturated solution of Epsom Salts (magnesium sulfate). If these solutions are not available, continue washing in cool water until medical help is obtained. (See Attached	

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The information set forth herein is furnished free of charge and is based on technical data that Du Pont believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. Noth herein is to be taken as a license to operate.

## SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid)			
HAZARDOUS DECOMPOSITION PRODUCTS HF Vapors, H <sub>2</sub> (from contact with metals).			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

## SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
Do not breathe vapor, get in eyes, on skin or on clothing. Keep personnel upwind of spill & do not enter area unless equipped with full protective equipment & self-contained breathing apparatus.

WASTE DISPOSAL METHOD  
Flush immediately with water, neutralize with lime & flush again with water. Run-off to sewer may create toxic hazard; notify authorities.

## SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specific Type) None for normal use. Self-contained breathing apparatus for severe exposure (tank cleaning)

VENTILATION	LOCAL EXHAUST <u>Maintain adequate ventilation</u>	SPECIAL Exhaust systems <u>should be located adjacent to source of fumes &amp; remotely discharged.</u>
	MECHANICAL (General) <u>(Forced draft ventilation. Scrubbers for fume control.)</u>	

PROTECTIVE GLOVES <u>Rubber or plastic coated gloves covering forearms.</u>	EYE PROTECTION <u>Chemical safety goggles or face shields.</u>
--	---

OTHER PROTECTIVE EQUIPMENT Hard hat, rubber shoes, rubber apron, long sleeved shirt & trousers of wool or "ORLON". In emergencies or work with considerable exposure, wear full rubber suit with hood.

## SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING  
Store in well ventilated buildings or sheds. Protect against heat & physical damage. Do not get in eyes, on skin, on clothing. Do not breathe vapor. Keep container closed. Wash thoroughly after handling.

OTHER PRECAUTIONS  
Before handling, obtain & thoroughly read MCA-SD-25

E-18963

Date: 11/77

For more information refer to: Du Pont Storage & Handling Bulletin (A-72709)  
 Manufacturing Chemists Association SD-25

